Claims

1-29. (Cancelled)

30. (Amended) A bioabsorbable endoprosthesis comprising:

at least one elongate element having an outer surface, the element including a bioabsorbable polymer adapted to undergo degradation *in vivo*, the element including an elongate, axially extending reservoir portion adapted to collect a by-product of the degradation of the bioabsorbable polymer;

wherein the at least one element occupies a total element volume including a reservoir volume occupied by the at least one reservoir portion, and the reservoir volume is at least about ten percent of the total element volume.

31-43. (Cancelled)

44. (New) The endoprosthesis of claim 30 wherein:

the reservoir portion comprises at least one axially extending core open to opposite ends of the element.

45. (New) The endoprosthesis of claim 44 wherein:

the reservoir portion comprises a plurality of the axial extending cores.

46. (New) The endoprosthesis of claim 44 wherein:

a volume of the at least one axially extending core comprises from about ten percent to about 30 percent of the total element volume.

47. (New) The endoprosthesis of claim 30 wherein:

the reservoir portion comprises at least one axially extending internal cavity recessed from the outer surface.

48. (New) The endoprosthesis of claim 47 wherein:

the at least one cavity occupies a cavity volume ranging from about ten percent to about thirty percent of the total element volume.

49. (New) The endoprosthesis of claim 47 wherein:

an average cross-sectional area of the cavity ranges from about ten percent to about thirty percent of a cross-sectional area of the elongate element.

50. (New) The endoprosthesis of claim 30 wherein:

the volume of the reservoir portion ranges from twenty percent to about forty percent of the total element volume.

51. (New) The endoprosthesis of claim 30 wherein:

the at least one elongate element is formed into a tubular, radially expandable structure.

52. (New) The endoprosthesis of claim 51 wherein:

the at least one elongate element comprises a first plurality of elements helically wound about an axis in a first direction, and a second plurality of elements helically wound about the axis in a second direction opposite the first direction to form multiple crossings with the first plurality of the elements.

53. (New) The endoprosthesis of claim 52 wherein:

the first and second pluralities of the elongate elements, at the multiple crossings, form crossing angles ranging from about 120 degrees to about 150 degrees.

54. (New) The endoprosthesis of claim 52 wherein:

the first and second pluralities of the elongate elements are interbraided.

55. (New) The endoprosthesis of claim 30 wherein:

the bioabsorbable polymer consists essentially of a polymer from the group consisting of: PLLA, PDLA, and their combinations.

56. (New) The endoprosthesis of claim 30 wherein:

the bioabsorbable polymer consists essentially of a polymer selected from the group consisting of: polylactide, polyglycolide, and their combinations.

57. (New) The endoprosthesis of claim 30 wherein:

the bioabsorbable polymer consists of a polymer selected from the group consisting of: polyglycolide, polygluconate, polydioxanone, and their combinations.

58. (New) The endoprosthesis of claim 30 wherein:

the at least one elongate element consists essentially of the bioabsorbable polymer.

59. (New) The endoprosthesis of claim 30 wherein:

the at least one elongate element is flexible.

60. (New) A bioabsorbable endoprosthesis comprising:

an elongate element wound about an axis to define a tubular structure having a predetermined radius and length when in an unloaded state, said elongate element having an outer surface, including a bioabsorbable polymer adapted to undergo degradation *in vivo*, and including an elongate, axially extending reservoir portion adapted to collect a by-product of the degradation of the bioabsorbable polymer;

wherein the element occupies a total element volume including a reservoir volume occupied by the reservoir portion, and the reservoir volume is at least about ten percent of the total element volume; and

wherein the elongate element is adapted for a simultaneous axial elongation and radial reduction, whereby the tubular structure is radially compressible into a reduced-radius, extended-length state to facilitate an intraluminal delivery of the structure to a selected treatment site within a body lumen, said elongate element having sufficient structural strength to withstand post-delivery confinement in the body lumen and to exert a radial force against a wall defining the body lumen, said structural strength tending to diminish as said degradation progresses.

61. (New) The endoprosthesis of claim 60 wherein:

the reservoir portion comprises at least one axially extending core open to opposite ends of the element.

62. (New) The endoprosthesis of claim 61 wherein:

the reservoir portion comprises a plurality of the axially extending cores.

63. (New) The endoprosthesis of claim 62 wherein:

a volume of the at least one axially extending core comprises from about ten percent to about thirty percent of the total element volume.

64. (New) The endoprosthesis of claim 60 wherein:

the reservoir portion comprises at least one axially extending internal cavity recessed from the outer surface.

65. (New) The endoprosthesis of claim 64 wherein:

the at least one cavity occupies a cavity volume ranging from about ten percent to about thirty percent of the total element volume.

66. (New) The endoprosthesis of claim 64 wherein:

an average cross-sectional area of the cavity ranges from about ten percent to about thirty percent of a cross-sectional area of the elongate element.

67. (New) The endoprosthesis of claim 60 wherein:

the elongate element comprises a first plurality of elongate elements helically wound about an axis in a first direction, and a second plurality of elongate elements helically wound about the axis in a second direction opposite the first direction to form multiple crossings with the first plurality of the elements.

68. (New) The endoprosthesis of claim 67 wherein:

the first and second pluralities of the elongate elements are interbraided.

69. (New) The endoprosthesis of claim 60 wherein:

the elongate element consists essentially of the bioabsorbable polymer.

70. (New) The endoprosthesis of claim 60 wherein:

the elongate element is flexible, whereby the tubular structure is radially self-expanding.

71. (New) A bioabsorbable endoprosthesis comprising:

a tubular structure comprising a first elongate element having an outer surface and wound helically about an axis in a first direction, the tubular structure further comprising a second elongate element wound helically about the axis in a second direction different from the first direction to form crossings with the first elongate element, wherein each of the first and second elements includes a bioabsorbable polymer adapted to undergo degradation *in vivo*;

wherein each of the first and second elongate elements occupies a total element volume including an elongate, axially extending open reservoir volume for receiving a by-product of the degradation of the bioabsorbable polymer, and the reservoir volume is at least about ten percent of the total element volume; and

wherein the first and second elements are adapted for a simultaneous axial elongation and radial reduction whereby the tubular structure is radially compressible into a reduced-radius, extended-length state to facilitate an intraluminal delivery of the structure to a selected treatment site within a body lumen, said first and second elements having a sufficient structural strength to withstand confinement in the body lumen and to exert a radial force against a wall defining the body lumen, said structural strength tending to diminish as said degradation progresses.

72. (New) The endoprosthesis of claim 71 wherein:

the reservoir volume includes at least one core extending axially along the element and open to opposite ends of the element.

73. (New) The endoprosthesis of claim 71 wherein:

the reservoir volume comprises at least one axially extending internal cavity recessed from the outer surface.

74. (New) The endoprosthesis of claim 71 wherein:

the first and second elongate elements are interbraided.

75. (New) The endoprosthesis of claim 71 wherein:

the first and second elongate elements are flexible, whereby the tubular structure is radially self-expanding.